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UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Research Service
Animal and Poultry Husbandry Research Branch

BIBLIOGRAPHY ON THE USE OF MCLASSES IN LIVESTCCK FEEDING by N. R. Ellis and R. E. Davis

Beef Cattle

- Beet molasses in fattening rations。 E. J. Maynard (Colo.). Breeder's Gaz. 79(5): 213 (1921) ESR 44,672. See also Proc. Am. Soc. Animal Prod. 1922: 73
- Cattle feeding investigations, 1919-20. C. W. McCampbell and H. B. Winchester. Kans. Sta. Cir. 86 (1921).
- Feeding blackstrap molasses to young calves. R. C. Calloway. La. Bull, 180 (1921). See also La. Rpt. 1921
- Cane vs. beet molasses for cattle. J. M. Evvard et al. Iowa Sta. Rpt. 1920. See also Proc. Am. Soc. Animal Prod. 1920: 62.
- Preliminary reports of experiments with feeding steers, using cottonseed and molasses. E. Barnett and C. J. Goodell. Miss. Cir. 48 (1923)
- The use of a limited amount of molasses in fattening yearling steers. E. A. Trowbridge. Mo. Bull. 223 (1924).
- Steer feeding experiments at the Worland, Wyo. State Farm. Wyo. Rpt. 1925: 92.
- Cane molasses for finishing calves. C. C. Culbertson et al. Iowa Leaflet 27 (1929). See also Ohio Ann. Rpt. 1932 (Bull. 497).
- Molasses in rations for fattening calves. P. Gerlaugh. Ohio Bull. 463 (1930). See also Ohio Bimo. Bull. 154: 7 (1932); Proc. Am. Soc. Animal Prod. 1931: 179; and Ohio Sta. Bull. 532: 68 (52nd Ann. Rpt. 1932-33).
- Feeding cane molasses to fattening cattle. W. H. Peters. Minn. Bull. 274 (1931), 300 (1933).
- Feeding and nutrition studies with livestock. La. Bien. Rpt. 1930-31.
- Molasses as a substitute for corn in beef finishing rations. F. R. Edwards (Ga.). Proc. Am. Soc. Animal Prod. 1931: 176.
- Molasses alfalfa supplement for fattening yearling cattle. E. A. Trowbridge and H. C. Moffet (Mo.). Proc. Am. Soc. Animal Prod. 1931: 182.

30 C.

100 4

- Beef cattle investigations. ... Jacob. lenn. upt. 1932, 1933
- Blackstrap molasses as a feed for fattening steers and farm work horses. Froc. Fssoc. Southern Agr. Workers 33: 51 (1933). M. G. Snell (La.).
- Sugar beet byproduct rations for cattle. Utah Bull. 250 (Bien. Rpt. 1933-34).
- Molasses for fattening steers. Wis. Bull. 428 (Ann. Rpt. 1932-33), p. 17.
- Cane molasses as a cattle feed. S. Labh Singh and S. Gambhir Singh. Agr. and Livestock in India 4(2): 156 (1934) ESR 73,369.
- Further observations on cane molasses as a cattle feed. S. Labh Singh and Sodhi Gambhir Singh. Agr. and Livestock in India 5(2): 3 (1935).
- Factory cane molasses as a cattle feed. Labh Singh and Sodhi Gambhir Singh. Agr. and Livestock in India 7: 347-58 (1937). C.A.2/ 2598.
- Blackstrap molasses and corn-soybean silage for fattening steers. . G. Snell. La. Bull. 266 (1935).
- Molasses-alfalfa supplements to grain rations for calves. No. Bull 370: 10 (Rpt. of the Dir. 1935).
- Cane molasses for steers. Hawaii Rpt. 1936: 70.
- Wintering heifer calves upon silage and varying amounts of molasses, cottonseed cake, and corn. Nebr. Mim eo. Cir. 165 (1937).
- The value of molasses as an appetizer (for beef cattle) when fed with cottonseed hulls (and) . . with wheat straw. A. D. Weber and W. E. Connell. Kans. Agr. Expt. Sta. 8th Bien. Rpt. 1935/36: 62-3 (1936).
- Cane molasses as substitute for corn. No. Bull. 387: 20 (Ann. Rpt. 1936).
- Beef cattle feeding experiments. Hawaii Ann. Rpt. 1937: 66.
- Utilization of blackstrap molasses with corn and oats in fattening steer calves. W. L. Blizzard and B. R. Taylor (Okla.). Proc. Am. Soc. Animal Prod. 1937: 98. See also Okla. Bien Hpt. 1937-38.
- Cattle feeding 1936-7. Cane molasses. J. H. Skinner and F. G. King. Inc. Sta. Bull. 430 (1938).
- Rice byproducts and molasses for fattening cattle. La. Bien. Rpt. 1937-36.
- Blackstrap molasses in steer fattening. Fla. Ann. Mpt. 1938: 171; 1939:80; and 1941: 66.
- Rice straw and molasses as supplements to pasture feeds for range cattle. R. G. Macahilig. Philippin Agr. 28: 561 (1939). ESA 82,805.

- "C" molasses vs. cane molasses, in fattening. Also beet molasses. Colo.
 Ann. Rpt. 1937-38.
- Utilization of molasses. I. The use of cane by-products in fattening beef cattle. Alvin R. Lamb. Hawaiian Planters' Record 40: 121-5 (1936);
 II. Pen-fattening of beef cattle on molasses and other by-product feeds. Ibid. 42: 77-88 (1938). cf. Ibid. 35: 341-4 (1931); III. Feeding trials on laboratory animals to determine the value of bagasse, molasses and kiawe bean (Prosopis chilensis) meal. Ibid. 42: 89-96. C.A. 32: 71561 (1938).
- Feeding blackstrap molasses to fattening steers. C. I. Bray, M. G. Snell, F. L. Morrison, and M. E. Jackson. La. Agri. Expt. Sta. Bull. 394: 43 (1945).
- Comparison of corn and corn-molasses mixture for fattening beef calves before and after weaning. M. W. Hazen and James E. Comfort. U. S. Dept. of Agr. Tech. Bull. 862 (1943).
- Corn-molasses mixtures compared with corn for fattening beef cattle in the Coastal Plain Area. Earl W. McComas, James R. Douglas, and Byron L. Southwell. U. S. Dept. of Agr. Tech. Bull. 864 (1943).
- Effect of molasses and molasses feed on quality of beef. R. J. Webb, and S. Bull. Ill. Agr. Expt. Sta. Bull. 510: 487-496 (1945)
- Dried molasses-beet pulp and beet molasses for fattening cattle. H. P. Singleton, M. E. Ensminger, and W. W. Heinemann. State College Wash., Agr. Expt. Sta. Bull. 469: 31 (1945).
- Bagomolasses as cattle feed. 1. Digestibility and nutritive value of bagomolasses. S. C. Ray and S. K. Talapatra. 2. The use of bagomolasses for feeding working bullocks. N. K. Ayyar and A. W. Zubery. Indian J. Vet. Sci. 15: 133-140; 140-6 (1945).
- Citrus products for fattening cattle. W. G. Kirk, H. J. Fulford, and G. K. Davis (Fla.). J. Animal Sci. 8: 624 Proc. (1949).
- Corn cobs, molasses, urea for cattle feeding. W. M. Beeson (Ind.). Feed-stuffs 22 (47): 20-1:(1950).
- Corn cobs and molasses. W. M. Beeson (Ind.) Flour and Feed 51 (5): 22-3 (1950).
- The value of several ammoniated products as a feed for beef cattle. Ralph McCall and W. R. Graham, Jr. J. Animal Sci. 12: 798-805 (1953).
- Methods of feeding cane molasses and urea to beef cattle. A. D. Tillman, C. B. Singletary, J. F. Kidwell, and C. I. Bray (La.) J. Animal Sci. 10: 939-46 (1951).

Dairy Cattle

- Blackstrap molasses for dairy cattle. E.Brintnall. Miss. Cir. 38 (1921).
- Values of various new feeds for dairy cows. T. E. Woodward et al. U. S. Dept. of Agr. Bull. 1272 (1924).
- Feeding experiments with dairy cattle at the Pennsylvania Station. Pa. Bull. 188 (1924).
- The effect of cane molasses on the digestibility of a complete ration fed to dairy cows. P. S. Williams (Pa.) J. Dairy Sci. 8: 94 (1925) ESR 54, 67.
- Corn chops vs. came molasses for milk production in Puerto Rico. W. M. Ellison and J. Varas Catala (Puerto Rico). Puerto Rico Ann. Rpt. 1928: 99 ESR 62,165.
- Corn silage vs. a mixture of wet beet pulp and molasses for milk production. C. F.Monroe et al. Ohio Bimo. Bull. 148 (1931); Spec. Cir. 29 (1930).
- Sugarcane molasses on production and reproduction of dairy cows. Hawaii Rpt. 1932 and 1933.
- Beet pulp vs. molasses for milk production. Puerto Rico Rpt. 1932.
- Molasses as a dairy feed. Wis. Sta. Bull. 428 (1934) (Sta. Rpt). See also Am. Dairy Sci. Assn. Abs. papers, p. 40 (1934) by Echstedt et al.
- Value of cane molasses in the dairy ration. Hawaii Rpt. 1934, p. 24.
- Cane molasses as a feed for dairy cows. L. A. Henke. Hawaii. Bull. 73 (1934).
- Pineapple bran and came molasses. Hawaii Rpt. 1935, p. 20, and Hawaii Sta. A.H.D. Prog. Notes 13 (1936).
- Dehydrated molasses in dairy rations. N. J. Rpt. 1935, 1936.
- Molasses-corn fodder mixtures. Kans. Bien. Rpt. 1935-6.
- Palatability and nutritive value of A.I.V. and molasses-alfalfa silage for dairy cows. G. Bohstedt et al. (Wis.). Proc. Am. Soc. Animal Prod. 1937: 51.
- The value of dried molasses and yeast for dairy calves. O. P. Lepard et al. (Cornell Univ.). Abs. J. Dairy Sci. 21: 116 (1938).
- Utilization of urea and growth of heifer calves with corn molasses or cane molasses as the only readily available carbohydrate in the ration. R. C. Mills, C. C. Lardinois, I. W. Rupel, and E. B. Hart (Wis.). J. Dairy Sci. 27: 571-8 (1944) C.A. 39: 3339 (1945).
- The nutritive value of wood molasses as compared with cane molasses. N. F. Coloves, H. A. Keener, J. R. Prescott, and A. E. Teeri (N. H.) J. Dairy Sci. 32: 907-13 (1949):

- Wood Sugar molasses for dairy cattle. I. R. Jones. Oreg. Agr. Expt. Sta. Cir. 181: 12 (1949).
- The value of wood molasses for growth of dairy heifers. T. H. Blosser, G. W. Scott, R. E. Erb, and A. O. Shaw (Wash.). J. Dairy Sci. 32: 719 (1949).
- Molasses as a replacement for grain in the rations of growing heifers and milking cows. R. E. Mather and C. B. Bender (N. J.). J. Animal Sci. 10: 1056 (Proc.) (1951).
- Wood molasses as a feed ingredient for lactating cows. R. K. Waugh, J. L. Moore, H. L. Lucas, and E. W. Faires (N. C.). J. Animal Sci. 13: 44-8 (1954).

Horses and Mules

- Molasses for work mules. M. G. Snell and W. G. Taggart. La. Bien. Rpt. 1928-29 and La. Agr. Expt. Sta. Bull. 230 (1932).
- Blackstrap molasses for farm work mules. M. G. Snell and W. G. Taggart. Proc. Am. Soc. Animal Prod. 1931: 192.
- Molasses for work mules. M. G. Snell. Proc. Am. Soc. Animal Prod. 1932: 110. See also La. Bien. Rpt. 1932-33, and Proc. Assoc. Southern Agr. Workers 1932: 51.
- Molasses in the ration for horses. E. A. Trowbridge and H. C. Moffett. Mo. Sta. Bull. 370 (1936).

Swine

112 -

- Beet molasses as a feed for weanling pigs. W. E. Carroll. Trans. Utah Acad. Sci. 1: 205 (1908-1917) ESR 43, 180 abstract
- Hog feeding experiments. H. Hackedorn and J. Sotola. Wash. Bull. 169 (1922).
- Grazing and feeding trials with pigs. E. Barnett and C. J. Goodell. Miss. Bull. 218 (Blackstrap Molasses) (1923). ESR 50, 69. See also Miss. Rpt. 1925.
- Fattening rations for swine. M. F. Grimes. Pa. Bull. 215 (1927).
- Molasses for pigs. W. L. Robison. Ohio Bull. 516: 82 (1933).
- Cane molasses as a supplement to fattening rations for swine. L. A. Henke. Hawaii Sta. Bull. 69 (1933). See also Hawaii Ann. Rpt. 1933.
- Pineapple bran-molasses mixtures for fattening swine. L. A. Henke and G. W. H. Goo. Hawaii Sta. A. H. D. Prog. Notes No. 11 (1935). Ibid. No. 14 (1936).

1 :04-0

- Molasses for pregnant sows. Mo. Bull. 370 (Ann. Rpt. 1936).
- Molasses for fattening swine. Hawaii. Ann. Rpt. 1936, 1937
- Blackstrap molasses -- a poor feed for hogs. H. P. Gayden. Proc. Assoc. Southern Agr. Workers 37-38, p. 91 (1936-37)
- Comparison of cane molasses with other feeds. Nebr. Ann. Rpt. 1937.
- Blackstrap molasses as a substitute for corn and oats in fattening rations. C. P. Thompson (Okla.). Proc. Am. Soc. Animal Prod.: 145 (1938), :113 (1937). (See also Okla. Bien Rpt. 1936-38: 47)
- Molasses in swine rations. Wis. Bull. 440: 15 (Ann. Rpt.) (1938)
- Melasse som for til griser. (Molasses as food for pigs). M. Husby (Norway) Landbrukhogsk. Inst. hysdyrernoering foringsloere, Rpt. No. 11: 33 (1941). Report from Norsk Landbruk 471-3 (1941)
- Further studies on molasses as hog feed. Molasses versus rice bran in rations for growing and fattening pigs. Emmanuel T. Gervacio. Philippine Agr. 30: 492-8 (1941) C.A., 2037 (1942)
- Nutritional inadequacy of beet molasses rations for swine. Russel A. Rasmussen, Harry H. Smith, Ralph W. rhillips, and Tony J. Cunha. Utah Agr. Expt. Sta. Bull. 302: 5-22 (1942) C.A. 36, 70826 (1942)
- Cultivation of the sugar beet and its value for the feeding of hogs. W. Stahl (Germany). Zuckerrubenbau 22: 115-20, 121-6 (1940) C.A. 36, 71743 (1942)
- Cane molasses for pigs from weaning to a weight of seventy pounds. E. L. Willet, S. H. Work, L. A. Henke, and C. Maruyama. Hawaii Agri. Expt. Sta. Tech. Bull. 3: 15, Oct. 1946
- Nutritional disease in swine by feeding great amounts of molasses. Possible thiamine deficiency in pigs on rations containing silage preserved by formic acid. Per Slagsvold (Roy. Agr. College, Uppsala, Sweden). Kgl. Lantbrusk-Hogskol. Ann. 15: 251-90 (1948) (in English) C.A. 42, 6430b (1948)
- Effect of feeding citrus or cane molasses on carcass quality and the content of certain vitamins in pork. R. B. French, A. M. Pearson, T. J. Cunha, V. Schmidt, O. D. Abbot, C. L. Anderson, and R. S. Glasscock (Fla.). J. Animal Sci. 8: 612 (1949)
- Baby pigs have a sweet tooth. L. F. Nelson, L. N. Hazel, A. A. Moore, H. M. Maddock, G. C. Ashton, C. C. Culbertson, and D. V. Catron (Iowa). Feed-stuffs 25(12): 16-8 (Mar. 21, 1953)
- Garbage supplemented with molasses. E. L. Willett, L. A. Henke, and Charles Maruyama. Hawaii Agr. Expt. Sta. Bien. Rpt. 1944-46: 42 (1947)
- Cane molasses for weanling pigs. E. L. Willett, L. A. Henke, and Charles Maruyama. Hawaii Agr. Expt. Sta. Bien. Rpt. 1944-46: 40 (1947)

Sheep

- The utilization of molasses amids in comparison with protein by the organism of ruminants. W. Voltz et al. (Germany). Landw. Jahrb. 52: 431 (1918) ESR 46, 67
- Lamb feeding experiments in western Nebraska. J. A. Holden, Nebr. Bull. 194 (1923)
- Beet byproducts for steers and lambs. E. J. Maynard (Colo.) Proc. Am. Soc. Animal Prod. 1922; 73
- Beet byproducts for fattening lambs. E. J. Maynard. Colo. Agr. Expt. Sta. Bull. 266 (1921)
- Cane and beet molasses for fattening lambs. J. M. Evvard et al. Iowa Bull. 215: 369 (1923)
- Lamb feeding experiments at the Worland, Wyoming State Farm. Wyo. Sta. Rpt. 1925: 92. ESR 54,759
- Comparative value of different kinds of molasses in lamb fattening rations. G. E. Morton. Colo. Rpt. 1929
- The use of cottonseed meal, cottonseed hulls and molasses in fattening rations for New Mexico range lambs. P. E. Neale. N. Mex. Pull. 200 (1932)
- Molasses for fattening lambs. Wis. Bull. 428: 17 (Ann. Rpt. 1932-33) (1934)
- Molasses reduces digestibility of fats in lamb ration. Okla. Bien. Rpt. 1936-38, p. 63
- Rice byproducts and molasses for lambs. La. Bien Rpt. 1937-38.
- The effect of molasses on the digestibility of a lamb-fattening ration. H. M. Briggs (Okla.). Proc. 30th Ann. Meeting Am. Soc. Animal Prod. 1937: 145-9. C.A. 32, 58766 (1938)
- Digestibility of soybean straw and soybean straw-molasses mixtures (in feeding experiments) with sheep. K. Scharrer and H. Nebelsiek (Germany). Z. Tierernahr. Futtermittlek, 1:072-81 (1938). C.A. 33, 10184 (1939)
- The effect of adding blackstrap molasses to a lamb-fattening ration. H. M. Briggs and V. G. Heller (Okla.). J. Agr. Res. 60: 65-72 (1940). C.A. 34, 47780 (1940)
- Molasses reduces digestibility of other components of rations. H. M. Briggs, V. G. Heller, and Robert Wall. Okla. Agr. Expt. Sta. Bien. Rpt. 1938-40: 62 (1940), cf. C.A. 34, 47788, C.A. 35, 29384 (1941)
- The effect of adding blackstrap molasses, K salts, sucrose, and corn sirup to a lamb-fattening ration. H. M. Briggs and V. G. Heller (Okla.). J. Agr. Res. 67: 359-67 (1943), cf. C.A. 37, 9152, C.A. 38, 12714

The utilization of ammoniated industrial by-products and urea by sheep.

A. D. Tillman and R. W. Swift (Pa.). J. Animal Sci. 12: 201-12 (1953)

Poultry

- Cane molasses for poultry. A. R. Winter (Ohio). Poultry Sci. 8: 369 (1929)
- Sugarcane molasses for chicks. Hawaii Ann. Rpt. 1932
- Cane molasses in poultry rations. C. M. Bice, Hawaii Bull. 67 (1933)
- Feeding came molasses to growing chicks and laying hens. A. J. G. Maw (Canada) Sci. Agr. 13(12): 743 (1933)
- Blackstrap molasses for poultry. La. Bien Rpt. 1932-33
- Cane molasses in fattening and laying rations. Hawaii Ann. Rpt. 1937: 81
- The nutritive properties of poultry feedstuffs (Cane molasses as a substitute for corn meal in laying rations). Cornell 48th Ann. Rpt.: 130 (1935)
- Blackstrap molasses and sweet potatoes for broilers. C. W. Upp (La.). Proc. Assoc. Southern Agr. Workers 37-38: 140 (1936-37)
- Cane molasses in poultry rations. C. W. Upp. La. Bull. 289 (1937)
- Cane molasses as a constituent of rations for growing fowls. Walther H. Ott, R. V. Boucher, and H. C. Knandel (Pa.). Poultry Sci. 20: 470 (1941) C.A. 36, 1284 (1941)
- Feeding-cane molasses as a constituent of poultry rations. I. Molasses for growing chickens. Walther H. Ott, R. V. Boucher, and H. C. Knandel (Pa.). Poultry Sci. 21: 340-5 (1942); cf. C.A. 36, 1285, C.A. 36, 65959 (1942)
- Feeding-came molasses as a constituent of poultry rations. II. Molasses for adult chickens. Walther H. Ott and R. V. Boucher (Pa.). Poultry Sci. 21: 536-9 (1942); cf. C.A. 36, 65961, C.A. 37, 9159 (1943)
- The feeding of poultry when normal foods are scarce. M. H. French. East African Agr. J., Kenya, Tanganyika, Uganda and Zanzibar 10: 152-8 (1945) C.A. 40, 1249² (1946)
- Use of molasses in poultry feeds. J. R. Couch (Tex.). Feedstuffs 26(35): 44-5 (Aug. 28, 1954)
- A study of B-grade and refinery B-molasses in layer rations. M. M. Rosenberg (Hawaii). Poultry Sci. 32: 605-12 (1953)
- Wood sugar molasses as a feedstuff for laying hens. W. T. Cooney and J. E. Parker (Ore.). Poultry Sci. 31: 343-50 (1952). C.A. 46, 11499h

Composition and Properties

- Cane syrup and molasses, their composition, production and consumption in the United States. W. L. Owen. Planter and Sugar Mfgr. 74:(9): 168 (1925)
- Detn. of weight per gallon of blackstrap molasses, i.g., F. Snyder and L. D. Hammond. U. S. Dept. Com., Bur. Standards Tech. Paper 345: 409 (1927)
- Keeping qualities of sugar cane molasses. C. A. Browne.(U.S.D.A.). Proc. Internatl. Soc. Sugar Cane Technol. Cong.: 216 (1936)
- Comparative analyses of molasses: A. T. Perkins and J. F. Merrill. Kans. Acad. Sci. Trans. 40: 131 (1937)
- Keeping quality of cane sugar molasses. H. C. P. Geerlings. Proc. Internatl. Soc. Sugar Can Technol. Cong. 6: 980 (1938)

Minerals

- The relation of iron from various sources to nutritioned anemia. H. S. Mitchell and L. Schmidt (Battle Creek, Mich.). J. Biol. Chem. 70: 471 (1926)
- The antianemic potency of cane and beet molasses. W. E. Krauss. Ohio Bimo. Bull. 147: 182 (1930)
- Studies on nutritional anemia. D. Dickens. Miss. Rpt. 1931
- The nutritional availability of iron in molasses. Robt. S. Harris, L. Malcomb Mosher, and John W. M. Bunker. Amer. J. Digest. Dis. and Nutr. 6: 459-62 (1939). C.A. 34, 10537 (1940)
- Nutritional availability of Fe in molasses. Robert S. Harris, L. Malcomb Mosher, and John W. M. Bunker. Biol. Res. Lab., Mass. Inst. Tech. Pub. 157; Internatl. Sugar J. 45: 215-6 (1943). C.A. 38, 55369 (1944)
- Variable mineral composition of black strap molasses. Charles A. Fort (U.S.D.A.). Sugar 41(11): 36-7 (1946)

Witamins . ogs. fr. certa

- Molasses as a source of vitamin B. Q.V. E. Nelson and E. H. Fulmer (Iowa). Indus. and Engin. Chem. 17: 199 (1925) ESR 53,660
- Molasses, sorghum and honey as sources of vitamin E. M. W. Taylor and V. E. Nelson (Iowa). Proc. Soc. Expt. Biol. and Med. 26: 521 (1929)
- Cane molasses vs. beet molasses as source of B_l and lactoflavin. P. György (West. Res. Univ., Ohio). Proc. Soc. Expt. Biol. and Med. 35:167 (1937)
- Steps in the concentration of vitamin B6. G. A. Emerson et al. J. Biol. Chem. 124: 377 (1938)
- Vitamin deficiencies in sugar-beet molasses. R. A. Rasmussen. Farm & Home Sci. (Utah Agr. Expt. Sta.) 3(2): 4 (1942)

- Antioxidant activity in sources of the B vitamins. Paul György and Rudolph Tomarelli. J. Biol. Chem. 147: 515-24 (1943)
- Effects of methods of preservation of roughage and of cane or wood molasses on vitamin excretion by cows. A. E. Teeri, D. Josselyn, N. F. Colovos, and H. A. Keener (N. H.). J. Dairy Sci. 34: 299-302 (1951). C.A. 45, 7656d (1951)

Miscellaneous

- Molasses feeds. Rothea (France). Ann. Falsif. 15(167-8): 339 (1922) ESR 49,370
- History and use of molasses. W. E. Fitch. Amer. Food J. 19, No. 5 (1924)
- The use of molasses in the feeding of animals. W. E. Cross. Estac. Exptl. Agr. Tucuman Cir. 13: 972 (1925)
- Use of molasses and sugar products for stock feeding. M. Bernard. J. Sta. Agron. Guadeloupe 5 (1925) See Planter and Sugar Mfr. 76 (14): 267 (1925)
- Molasses incorporated in grain mixtures. G. Bohstedt et al. (Wis.)
 Amer. Soc. Animal Prod.: 52 (1933)
- Molasses as a preserving agent in making soybean silage. E. C. Elting (S. Car.). J. Dairy Sci. 18: 440 (1935)
- Cane molasses as a livestock feed. Mo. Cir. 184 (1935)
- Cost of molasses for use in livestock rations. G. Bohstedt et al. Wis. Bull. (Ann. Rpt.) 430: 119-20 (1935)
- Molasses as a preserving agent in making soybean silage. E. C. Elting and J. P. La Master (S. C.). Proc. Assoc. Southern Agr. Workers 36: 11-13 (1935)
- Molasses hay silage. C. B. Bender et al. (N. J.). J. Dairy Sci. 19: 137 (1936) ESR 75,684
- Digestibility of molasses. Grass silage. Vt. Bull (Ann. Rpt.) 407 (1936)
- Molasses with drought fodders. Mo. Bull. (Ann. Rpt.) 370 (1936)
- Blackstrap molasses as a livestock feed. M. G. Snell et al. La. Cir. 19 (1937)
- Loss of nutrients in molasses silage. N. J. Ann. Rpt. 1936
- Sweetening dry bluegrass. L. F. Graber (Wis.). Proc. Amer. Soc. Animal Prod.: 201 (1936)
- Utilization of molasses. A. R. Lamb. Hawaii.Planters Rec. 40(2): 1121 (1936); 42(1): 77 (1938); 42: 89(1938)

- Soil and plant material analyses by rapid chemical methods. Francis E. Hance. Hawaii. Planters Rec. 40: 189-299 (1936). C.A. 31, 11382 (1943).
- Blackstrap molasses as a livestock feed. M. G. Snell, Charles W. Upp, and R. H. Lush. La. Agr. Expt. Sta. Cir. 19: 1-4 (1937). C.A. 31, 66997 (1937)
- Inspection of commercial feedstuffs. Philip H. Smith. Mass. Agr. Expt. Sta. Control Ser. Bull. 110, 64 pp. (1941). C.A. 36, 14002 (1942)
- Molasses for growth of yeast. Science Library Bibliography Ser. No. 555; (London) Science Museum, 2 Leaves (1941). C.A. 38, 5638 (1944)

ME 1

1.1

- Preserving various foods from oxidative deterioration. Sidney Musher (to Musher Foundation Inc.). U. S. Pat. 2,282,784, May 12. C.A. 36, 59138 (1942)
- Molasses mixture for use in feeding livestock Thomas E. Moutray (to The Universal Royalty and Development Co.). U. S. Pat. 2,307,062, Jan. 5. C.A. 37, 35267 (1943)
- Use of molasses in grass silage preparation. Carl B. Bender (N. J.). Sugar Res. Found., Inc. (New York) Tech. Rpt. Ser. No. 4 (Apr. 1948)
- The nutritive value of wood molasses as compared with care molasses. N. F. Colovos, H. A. Keener, J. R. Prescott, and A. E. Teeri (N. H.). J. Dairy Sci. 32: 907-13 (1949). C.A. 14, 3589a (1950)
- Influence of adding AIV-acid, molasses, buttermilk, and whey powder in ensiling green crops. Joel Axelsson and Sture Eriksson (Sweden). Kgl. Lantbruks-Hogskol. Ann. 16: 515-30 (1949) C.A. 44, 771i (1950)
- Evaluation of molasses as a feed supplement. J. W. Hayward. Feedstuffs 24(40): 76-9 (Oct. 4, 1952)
- Molasses handling and mixing. Arthur G. Heideman. Feedstuffs 26(25): 40-53 (June 19, 1954)
- Molasses handling. Jerry Karstens. Feed Age 4(5): 32-7 (May 1954)
- Fodder value of the sugar-beet plant and by-products. O. Heinisch (Germany) Z. Zuckerind 2(77): 81-3 (1952). C.A. 47, 8397c
- White sugar and nutrition. F. Schneider (Germany). Zucker 6: 207-11 (1953) C.A. 47, 7799f.
- Feeding molasses to livestock. U. S. Dept. Agr. Leaflet No. 352. (Oct. 1953)
- Cane pith-molasses stock feeds. Rpt. Sugar Expt. Sta. Committee. Hawaii. (1) Sugar Planters Assoc. (1952)

- Cane vs. wood molasses used as preservatives for grass silage. H. S. Peet and A. C. Ragsdale. Mo. Agr. Expt. Sta. Bull. 605 (1953)
- Molasses in animal feeds. M. L. Scott (Cornell). The Sugar Molecule 7(2): 3-8 (1953)
- Dried Molasses

 Desiccating molasses and other liquids in vacuo. Albert C. Hougland. U. S. Pat. 2,089,093, Aug. 3. C.A. 31, 69167 (1937)
- Evaporating molasses to produce a solid food material for stock. Albert C. Hougland. U. S. Pat. 2,089,062, Aug. 3. C.A. 31, 69167 (1937)
- Drying molasses. Theodore Black and Jack Drew (to Molaska Co.) Canad. Pat. 369,598, Nov. 2, 1937. C.A. 32, 23823 (1938)
- Spray-drying apparatus suitable for fruit pulps, molasses, etc. Robert T. Northcutt and Andrew L. Johnston, Jr. (to Food Concentrates, Inc.) U. S. Pat. 2,110,167, Mar. 8. C.A. 32, 32134 (1938).
- Utilization of cane molasses. III. Dry, solid product from cane molasses and its possible technical applications. T. R. Bhaskaran, S. C. Pillai, and V. Subrahmanyan. J. Indian Inst. Sci. 22A: 139-48 (1939). cf. C.A. 33, 6637⁵, C.A. 33, 7924³ (1939)
- Apparatus for desiccating molasses, corn sugar, corn sirup, malt sugar, etc. David D. Peebles (to Golden State Co., Ltd.). U. S. Pat. 2,240,854, May 6. C.A. 35, 57432 (1941)
- Dehydration of molasses at Central Horminguero. Julio C. Gonzalez Maiz. Mem. assoc. tec. azucareros Cuba 17: 50-9 (1943). C.A. 38, 54281 (1944)
- Dehydration of blackstrap molasses. Ralph D. Lamie, Marion Moore, Charles F. Bonilla, and Edgar J. Gealy. Sugar 39(8): 26-7 (1944). C.A. 38, 51015 (1944)
- Packing and storage of solidified molasses in a dry state. J. G. Shrikhande. Indian Sugar 8: 73 (1945). C.A. 39, 38748 (1945)

11.

- Feeding experiments with dried molasses-beet pulp. Nils Olsson and Folke Jarl (Norway). Lantbrukshogskol. Husdjursforsoksanstalt., Medd. No. 18, 60 pp. (1945). C.A. 40, 1952 (1946)
- Apparatus for drying molasses. Robert T. Northcutt and Robert T. Northcutt, Jr. (to Food Concentrates, Inc.). U. S. Pat. 2,391,033, Dec. 18, 1945. C.A. 40, 68601 (1946)
- The Marketing of Feed Molasses. L. John Kutish. U. S. Dept. Agr., PMA, Sugar Branch, p. 31 (Feb. 1950)
- Marketing Industrial Molasses. B. K. Doyle. U. S. Dept. Agr. Inform. Bull. 82: 54 (Dec. 1951)

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